

CLAIM AMENDMENTS

1-14 (canceled)

15. (new) A method of cutting a sheet-form piece of metal into one or several smaller pieces by using camera means and a controllable cutting apparatus, the directions and values of the coordinate systems of which are calibrated to correspond to each other, the method comprising:

    placing the piece to be cut on a cutting surface located within a recording area of the camera means,

    recording an image of the piece on the cutting surface by the camera means,

    on the basis of the image, providing information regarding outlines of the piece to a positioning system,

    selecting at least one type of a small part,

    employing the positioning system to place a desired number of instances of said at least one type of small part within an area bounded by the outlines of the piece, to establish cutting paths,

    inputting the cutting paths into a control system of the cutting apparatus,

    employing the control system to determine cutting parameters, and

    cutting the piece on said cutting surface into parts under control of said control system in accordance with the cutting paths and the cutting parameters.

16. (new) A method according to claim 15, comprising determining a starting point of the cutting and the cutting paths automatically or by operator-aided means, and inputting data specifying the starting point into the control system of the cutting apparatus.

17. (new) A method according to claim 15, comprising positioning the sheet automatically to optimize the cutting paths, the starting point and use of material.

18. (new) A method according to claim 15, comprising changing the operation of the cutting apparatus from an incremental coordinate system proportioned to the zero point, over to an absolute coordinate system covering the whole work station.

19. (new) A method according to claim 15, comprising using a numerically controlled thermal cutting machine, a manipulator or a robot as a cutting apparatus.

20. (new) A method according to claim 15, comprising using a light source to be reflected as ancillary equipment while recording said image.

21. (new) A method according to claim 20, comprising using a laser bar as said ancillary equipment.

22. (new) A method according to claim 15, wherein the parts cut from the piece on said cutting surface are parts of a metal structure.